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ENVIRONMENT

How a Ban on Plastic Bags Can Go Wrong

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By Adam Minter a A

When the city council in Austin, Texas, passed a single-use plastic shopping bag ban in 2013, it assumed environmental benefits would follow. The calculation was reasonable enough: Fewer single-use bags in circulation would mean less waste at city landfills.

Two years later, an assessment commissioned by the city finds that the ban is having an unintended effect — people are now throwing away heavy-duty reusable plastic bags at an unprecedented rate. The city's good intentions have proven all too vulnerable to the laws of supply and demand.

What's true for Austin is likely true elsewhere. Plastic bag bans are one of America's most popular environmental measures of recent years: Since San Francisco became the first U.S. city to implement a ban in 2007, more than 100 other U.S. cities have joined the cause. While it's been relatively easy to rally consensus around these bans, however, it's been far harder to achieve significant results.

Part of the problem is that -- despite the world-saving rhetoric that typically promotes and supports plastic bag bans -- plastic bags simply aren't that big of a problem. According to the national data recorded by the EPA in 2013, the weight of single-use plastic shopping bags amounted to around 0.28 percent of the total municipal solid waste that Americans generate. A more finely tuned litter survey in Fort Worth, Texas (reported in the Austin assessment) found that just 0.12 percent of the weight of litter in the city (which does not have a ban) comes from single-use bags.

Nonetheless, as proponents of bag bans rightly point out, weight isn't the only measure of environmental impact. Single-use plastic bags pose outsized problems in the form of visual

pollution on the landscape -- South Africans joke that plastic bags are their "national flower," due to their propensity to hang on branches -- and damage and delays at high-tech recycling centers. (Reusable bags usually aren't eligible for recycling, but when they end up at centers by mistake, they often wrap around and jam moving equipment.) Single-use bags can also pose health hazards to wildlife and livestock -- during a recent trip to Dubai, I heard a plastic recycler lament that ranched camels frequently die from ingesting the plastic bags that are constantly catching flight in the desert wind -- and even when they do wind up at landfills, they take centuries to decompose.

There's little doubt that targeted bans can mitigate these kinds of effects by cutting down on the use of single-use bags in the first place. In Austin, for example, a post-ban survey found that single-use plastic bags accounted for only 0.03 percent of the total litter collected in the city in 2015. Assuming the pre-ban rate was closer to the 0.12 percent in nearby Fort Worth, that marks a roughly 75 percent reduction of single-use plastic bags in Austin's landfills.

But, as the Austin assessment pointedly notes, reducing the use of a product that's harmful to the environment is no guarantee of a positive environmental outcome. Among the main environmental benefits of Austin's ban was supposed to be a reduction in the amount of energy and raw materials used to manufacture the bags. To that end, the city encouraged residents to instead use reusable bags. Those bags have larger carbon footprints, due to the greater energy required to produce their stronger plastics, but the city figured the overall impact would be lower, as consumers got acquainted with the new, more durable product.

What the city didn't foresee is that residents would start treating reusable bags like single-use bags. The volume of reusable plastic bags now turning up at the city's recycling centers has become "nearly equivalent to the amount of all of the single use bags removed from the recycling stream as a result of the ordinance implemented in 2013," according to the assessment. And those lightly used bags are landfill-bound, because recycling isn't any more cost-effective for reusable plastic bags than the single-use variety.

Some of these issues could be addressed through the increased use of reusable canvas bags. But canvas is even more carbon intensive to produce than plastic; studies suggest consumers would need to use a single canvas bag around 130 times before they start achieving any net environmental benefit as compared with a single-use plastic bag. And, for some consumers, the higher price for canvas bags may be prohibitive, in any case.

Austin deserves to be commended for its candid assessment of what its plastic bag ban has actually accomplished; it's probably not the only city where a ban has produced unintended environmental consequences. That shouldn't deter the scores of other cities in the U.S. and

elsewhere considering their own plastic bag bans. But it should encourage a more thorough and realistic assessment of what such a ban can actually accomplish, and what damage it might inflict along the way. When it comes to environmental policy, good intentions often aren't good enough.

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